

WHAT IS CLAIMED IS:

- 1 1. A driver circuit comprising:
2 an output transistor connected between a voltage terminal and an
3 output node to produce an output signal on said output node, said output transistor
4 including a control terminal;
5 a current source connected to said control terminal of said output
6 transistor to provide a reference current;
7 a feedback capacitor connected from said output node to said
8 control terminal of said output transistor to control said output transistor as a
9 function of a difference between current through said capacitor and said reference
10 current.
- 1 2. The driver circuit of claim 1 further comprising a memory operatively
2 connected to said control terminal of said output transistor, said memory being
3 configured to store a signal on said control terminal of said output transistor from
4 a previous operating cycle in which said output transistor was activated.
- 1 3. The driver circuit of claim 2 wherein said memory includes a memory
2 capacitor and an amplifier, said amplifier being connected to said memory
3 capacitor and said output transistor such that said amplifier is selectively
4 configured in a voltage follower configuration to store said signal on said control
5 terminal of said output transistor in said memory capacitor.
- 1 4. The driver circuit of claim 3 further comprising a controlled switch located
2 between said memory capacitor of said memory and said control terminal of said
3 output transistor, said switch comprising a control input connected to said output
4 node.
- 1 5. The driver circuit of claim 1 wherein said current source is configured to
2 generate said reference current proportional to a reference voltage and a reference
3 frequency.

1 6. The driver circuit of claim 5 wherein said current source includes a
2 frequency-to-current converter.

1 7. The driver circuit of claim 1 further comprising a first switch located
2 between said voltage terminal and said output transistor and a second switch
3 located between said current source and said control terminal of said output
4 transistor, said first and second switches being controlled by an input signal.

1 8. The driver circuit of claim 1 further comprising:
2 a second output transistor connected between said output node and
3 a second voltage terminal, said second output transistor including a control
4 terminal;
5 a second current source connected to said control terminal of said
6 second output transistor; and
7 a second feedback capacitor connected from said output node to
8 said control terminal of said second output transistor.

1 9. A driver circuit comprising:
2 an output transistor connected between a voltage terminal and an
3 output node to produce an output signal on the output node, said output transistor
4 including a control terminal;
5 a memory connected to said control terminal of said output
6 transistor, said memory being configured to store a signal on said control terminal
7 from a previous operating cycle in which said output transistor was activated;
8 a current source connected to said control terminal of said output
9 transistor to provide a reference current; and
10 a feedback capacitor connected from said output node to said
11 control terminal of said output transistor to control a rate of signal change on said
12 output node.

1 10. The driver circuit of claim 9 wherein said memory includes a memory
2 capacitor and an amplifier, said amplifier being connected to said memory
3 capacitor and said output transistor such that said amplifier is selectively
4 configured in a voltage follower configuration to store said signal on said control
5 terminal of said output transistor in said memory capacitor.

1 11. The driver circuit of claim 10 further comprising a controlled switch
2 located between said memory capacitor of said memory and said control terminal
3 of said output transistor, said switch comprising a control input connected to said
4 output node.

1 12. The driver circuit of claim 9 wherein said current source is configured to
2 generate said reference current proportional to a reference voltage and a reference
3 frequency.

1 13. The driver circuit of claim 12 wherein said current source includes a
2 frequency-to-current converter.

1 14. The driver circuit of claim 12 further comprising a first switch located
2 between said voltage terminal and said output transistor and a second switch
3 located between said current source and said control terminal of said output
4 transistor, said first and second switches being controlled by an input signal.

1 15. The driver circuit of claim 9 further comprising:
2 a second output transistor connected between said output node and
3 a second voltage terminal, said second output transistor including a control
4 terminal;
5 a second memory connected to said control terminal of said second
6 output transistor, said second memory being configured to store a signal on said
7 control terminal of said second output transistor from a previous operating cycle
8 when said second output transistor was activated;
9 a second current source connected to said control terminal of said
10 second output transistor to provide a second reference current; and
11 a second feedback capacitor connected from said output node to
12 said control terminal of said second output to control a second rate of signal
13 change on said output node.

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1 16. A method for driving an electrical device, said method comprising:
2 receiving an input signal;
3 applying a stored signal to an output transistor in response to said
4 input signal to produce an output signal on an output node; and
5 controlling said output signal on said output node using a
6 difference between a reference current and current capacitively fed back from said
7 output node.

1 17. The method of claim 16 further comprising storing a control signal on said
2 output transistor as said stored signal.

1 18. The method of claim 16 wherein said controlling includes generating said
2 reference current using a reference frequency and a reference voltage, and
3 applying said reference current to a control terminal of said output transistor.

1 19. The method of claim 16 further comprising:
2 applying a second stored signal to a second output transistor in
3 response to said input signal to change said output signal on said output node; and
4 controlling said output signal on said output node using a
5 difference between a second reference current and current through a second
6 capacitive feedback from said output node to said second output transistor.

1 20. The method of claim 19 further comprising alternately activating said
2 output transistor and said second output transistor.